

# NATIONAL ACADEMY OF SCIENCES

## NATIONAL RESEARCH COUNCIL

2101 CONSTITUTION AVENUE, N.W., WASHINGTON, D.C. 20418

### OFFICE OF SCIENTIFIC PERSONNEL NASA INTERNATIONAL FELLOWSHIPS

**N65-87245**

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

INTERNATIONAL UNIVERSITY FELLOWSHIPS IN SPACE SCIENCE

*16 Pages*  
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Quarterly Report  
and  
Annual Financial Report  
NASr-62

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*NASA CWS-9388*

September 30, 1964

### UNPUBLISHED PRELIMINARY DATA

During the first three years of this program, from September 1961 to September 1964, 34 students from 17 countries held NASA International University Fellowships at the 21 universities in the United States that participate in the program.

At the beginning of the fourth Fellowship year, there are 50 NASA Fellows from 16 countries at 17 of the participating U.S. universities. Ten of the current Fellows are continuing 1963 and 1964 appointments, and 40 started in the 1964 fall university term.

This report lists the 14 Fellows whose appointments terminated during the June-September 1964 quarter, with information on the ten academic degrees earned, and future plans for study or employment in their fields of space science.

It also lists the current Fellows, and describes the Orientation program provided by the National Aeronautics and Space Administration and the National Academy of Sciences for the new Fellows, which was held in Washington from Monday, August 31 through Friday, September 4, 1964.

In addition to the annual financial report for the period from October 1, 1963 through September 30, 1964, this report contains three tabulated lists:

#### 1. CURRENT FELLOWSHIPS

(Fifty Fellows: Age, Academic Level, Country, Sponsor, University, Term of Appointment, Department, and Field of Study)

#### 2. UNIVERSITIES

(Alphabetical List, by States, with Current Fellows at each)

#### 3. COUNTRIES

(Countries that have sponsored NASA Fellowships:

Former Fellowships: Names of Fellows and Terms of Fellowships

Current Fellowships: Names of Fellows, Terms of Appointment; and University attended)

*Sciences and*

FORMER FELLOWSHIPS

Of the 24 Fellows on the program on July 1, 1964, 14 completed their appointments during this quarter.

Fellowship Transfers - 3

As noted in the quarterly report for June 30, 1964, Dr. Yutaka UCHIDA of Japan transferred in July 1964 from a NASA Fellowship at Princeton University to a research position at the High Altitude Observatory in Boulder, Colorado.

Two Fellows from Spain, Mr. José Luis ALMUZARA and Mr. José Luis URRUTIA, completed two-year NASA Fellowships at Stanford University in September 1964. With the agreement of their sponsor, the European Space Research Organisation, these two Fellows have transferred to the sponsorship of Stanford University, which has granted them research assistantships to complete work for their doctorates in Aeronautics and Astronautics.

Fellowship Terminations - 11

Eleven Fellows completed their appointments during this quarter, and returned to their own countries.

Two-Year Fellowships (1962-1964) - 4

Dieter BREZING received the Ph.D. degree from Columbia University for a study in Hydrogen Plasma, and will continue research in High Temperature Phenomena at the Institute for Thermodynamics of Flight Propulsion of the Technische Hochschule at Stuttgart, Germany.

Gilbert DE COUVREUR of Belgium received the Ph.D. in Electrical Engineering from the State University of Iowa, and has applied for a position at the European Space Technology Center (ESTEC).

Philippe DE MARCHIN received the M.S. in Electrical Engineering from the University of Arizona. After his military service is completed in Belgium, he hopes to work for ESTEC.

Sikandar ZAMAN received the M.S.E. from the Department of Aeronautical and Astronautical Engineering of the University of Michigan. He is now working in France under the Pakistan Space Technology Project, under the continued sponsorship of the Pakistan Space and Upper Atmosphere Committee of the Pakistan Atomic Energy Commission.

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Fellowship Terminations (continued)

One-Year Fellowships (1963-1964) - 7

Jürgen ACKERMANN received the M. S. in Electrical Engineering from the University of California at Berkeley. He is continuing his work on Nonlinear Sampled-data Systems at the Institute for Guidance and Control of the German Experimental Institution for Aeronautics and Astronautics.

Alvaro AZCARRAGA received the M. S. from Princeton University for research in Solid Propellant Technology. He will work in the Spanish Institute of Aeronautical Technology (INTA), and hopes to do some teaching and research at Madrid University.

Karl BRAMMER received the M. S. from the Massachusetts Institute of Technology for research in Feedback Systems, and has returned to Germany to work for his sponsor, the Federal Ministry for Scientific Research.

Jean-Claude HERAUD received the M.S. in Electrical Engineering from Stanford University, for research in Plasma Science and Wave Propagation. After completion of his 16 months' military service in France, he plans to work for the French National Center for Space Studies (CNES), and continue his work toward the doctorate.

Pierre MACAR received the M. S. in Astrophysics from the University of Colorado. On his return to Belgium he will work for six months at the Institute of Astrophysics in Liège, and will then have 13 months of military service.

Shigeru MIYAZAKI attended the joint Japanese-United States sounding rocket experiment in September 1963, and submitted two papers to the October 1963 conference on Direct Measurements in the Lower Ionosphere, held at the University of Illinois. He has returned to his position at the Radio Research Laboratories in Japan, where he will continue his research in plasma and atmospheric physics.

Michel SIVIRINE received the M. S. in Electrical Engineering from the California Institute of Technolofy for research in Control Systems and their optimization. After completing his 15 months' military service in France, he hopes to work as a research engineer in a laboratory special in control systems for space projects.

Several of these Fellows attended scientific conferences related to space science specialties, on the recommendation of their sponsors or their university advisors. Of the students who completed their Fellowships in the June-September 1964 quarter, 8 received Master's degrees, two received their doctorates, and two transferred to university sponsorship to complete doctorate work started during the Fellowship.

CURRENT FELLOWSHIPS

Fellowship Renewals - 8

Ten of the current 50 Fellows received their appointments in 1963 or early in 1964. Two of these, Walter HEILBRONNER of Germany, at Ohio State University; and Ronald WOODMAN of Peru, at Harvard University, will complete their one-year Fellowship appointments in February 1965.

The following eight have received Fellowship extensions or renewals:

Argentina	Dr. Roberto MANZANO - University of Minnesota
Belgium	Eric GERARD - Harvard University
China	Shui-Lin CHAO - University of Maryland
	Yung-Gann CHEN - Columbia University
	Chia-Lun HU - University of Colorado
	Mao-Fou WU - University of Chicago
Germany	Günter Walter TUMM - Columbia University
Netherlands	Gjalt Roelof SMIT - University of Maryland

New Fellowships

There are now seven Postdoctoral Fellows on the program: Dr. MANZANO, whose Fellowship started in 1963, and the following six whose Fellowships started in September 1964: Drs. HAHNE, HOMMEL, HUBER, LAMPIIS, PALUMBO, and WIBBERENZ.

Of the 50 present Fellows, 17 are accompanied in the United States by their families. As noted on page "1" of this report, a complete list of the 50 Fellows, including the 10 "Former" and 40 "New" Fellows, is included in this report.

ORIENTATION PROGRAM

Based on the experience with similar programs in 1962 and 1963, and on the recommendations of former Fellows, the National Aeronautics and Space Administration and the National Academy of Sciences decided to hold a five-day Orientation Program in Washington, for the new Fellows and their families. The program was scheduled early, from Monday, August 31 through Friday, September 4, 1964, to enable the Fellows to arrive at their universities in time to attend university orientation programs and to secure housing before the start of the academic year. The Orientation Program in Washington was attended by 36 Fellows, ten of them accompanied by their families. Other Fellows were unable to attend the program because of early start of their university year, or late arrival in the country.

Orientation Program (continued)

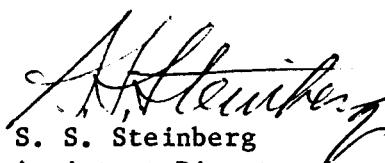
The program of the Orientation week in Washington (from Monday, August 31 through Friday, September 4, 1964) included an introductory visit by the NASA Fellows and their wives to the National Academy of Sciences, with a luncheon for the Fellows and their families with NASA and NAS personnel; a day-and-a-half program of lectures and a reception at the Washington International Center; two one-day visits by the Fellows to NASA Centers at the Goddard Space Flight Center in Greenbelt, Maryland and the Wallops Station at Wallops Island, Virginia; and a sightseeing tour on Capitol Hill, with a luncheon.

Interviews with the Voice of America were arranged for Friday, September 4, the last day of the Orientation week, by the NASA Office of International Programs, for the following eight new NASA Fellows:

Germany	HAHNE & UHRMEISTER
Japan	TSUKAMOTO & YAMANAKA
Pakistan	MAJID
Peru	POMALAZA
Spain	CRESPO & NAVARRO

Following the Orientation Program in Washington, the Fellows proceeded to their universities to start the Fellowship year of space science study and research.

Respectfully submitted,

  
S. S. Steinberg  
Assistant Director  
Office of Scientific Personnel

## NASA INTERNATIONAL UNIVERSITY FELLOWSHIPS IN SPACE SCIENCE

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September 30, 1964

CURRENT FELLOWSHIPS

NASA FELLOW	BIRTH DATE	CITIZENSHIP Sponsor	UNIVERSITY Fellowship Term	DEPARTMENT Field of Study
AKERSTEN S. Ingvar	5/6/33	SWEDEN ESRO	STATE UNIVERSITY OF IOWA Sept. 1964-65	PHYSICS The Magnetosphere
BARTELD'S Geert	1/17/35	NETHERLANDS NethMinEd	STANFORD UNIVERSITY Sept. 1964-65	AERO- & ASTRONAUTICS Solid Mechanics
BAUER Pierre	9/3/41	FRANCE ESRO	UNIVERSITY OF MICHIGAN Aug. 1964-65	ELECTRICAL ENGINEERING Servomechanics; Circuitry
BUZY-DEBAT Jean M.	12/28/40	FRANCE ESRO	UNIVERSITY OF MARYLAND Sept. 1964-65	PHYSICS Radio Astronomy
CHAO Shui-Lin	1/24/35	CHINA ChineseMinEd	UNIVERSITY OF MARYLAND Sept. 1963-65	PHYSICS
CHEN Yung-Gann	2/2/35	CHINA ChineseMinEd	COLUMBIA UNIVERSITY Feb. 1963-65	ELECTRICAL ENGINEERING Plasma Physics
CHIRIVELLA Casanova José	4/22/39	SPAIN ESRO	CAL. INST. OF TECHNOLOGY Sept. 1964-65	AERONAUTICS Fluid Mechanics
CRESSPO Martinez Antonio	5/30/41	SPAIN ESRO	CAL. INST. OF TECHNOLOGY Sept. 1964-65	AERONAUTICS Fluid Mechanics
DICKMANN'S Ernst D.	1/4/36	GERMANY FedMinSciRsch	PRINCETON UNIVERSITY Sept. 1964-65	AEROSPACE & MECH. SCIENCES Space Flight Dynamics

NASA International University Fellowships      Current Fellowships      September 30, 1964

NASA FELLOW	BIRTH DATE	CITIZENSHIP Sponsor	UNIVERSITY Fellowship Term	DEPARTMENT Field of Study
DIERSTEIN Rudiger	4/15/30	GERMANY FedMinSciRsch	MASS. INST. OF TECHNOLOGY Sept. 1964-65	AERO- & ASTRONAUTICS Astronautical Guidance
FABIS Bernhard F.	10/9/34	GERMANY FedMinSciRsch	MASS. INST. OF TECHNOLOGY Sept. 1964-65	AERO- & ASTRONAUTICS
FOURNIER Jean-Pierre	5/26/42	FRANCE ESRO	UNIVERSITY OF MICHIGAN Aug. 1964-65	ELECTRICAL ENGINEERING
GERARD Eric	7/3/39	BELGIUM EurSpRsChOrg	HARVARD UNIVERSITY Sept. 1963-65	ASTRONOMY Radio Astronomy
GIRAUDON Claude	1/5/41	FRANCE ESRO	STANFORD UNIVERSITY Sept. 1964-65	ELECTRICAL ENGINEERING Electronics
GUERMONPREZ Jean F.	12/23/41	FRANCE ESRO	CAL. INST. OF TECHNOLOGY Sept. 1964-65	APPLIED MECHANICS Applied Mechanics
HAHNE Dr. Erich	2/2/32	GERMANY FedMinSciRsch	CAL. INST. OF TECHNOLOGY Sept. 1964-65	ENG. & APPLIED SCIENCE Thermodynamics
HAMEL Peter	7/12/36	GERMANY FedMinSciRsch	MASS. INST. OF TECHNOLOGY Sept. 1964-65	AERO- & ASTRONAUTICS Flight Mech, Dynamics & Control
HANIF Mohammad	3/26/33	PAKISTAN PakSpaceRsch	U. OF CAL. - Los Angeles Sept. 1964-65	ASTRONOMY
HEILBRONNER Heinrich K.	7/21/39	GERMANY FedMinSciRsch	OHIO STATE UNIVERSITY Jan. 1964-65	GEOODESY
HOMMEL Dr. Raimund	1/18/39	AUSTRIA ESRO	NEW MEXICO STATE UNIV. Sept. 1964-65	PHYSICS Telemetry & Tracking, Instrumentation

NASA International University Fellowships      Current Fellowships      September 30, 1964

NASA FELLOW	BIRTH DATE	CITIZENSHIP	UNIVERSITY	DEPARTMENT
		Sponsor	Fellowship Term	Field of Study
HU Chia-Lun	1/18/36	CHINA ChineseMinEd	UNIVERSITY OF COLORADO Feb. 1963-65	ELECTRICAL ENGINEERING Wave Propagation
HUBER Dr. Martin	5/2/36	SWITZERLAND ESRO	HARVARD UNIVERSITY Sept. 1964-65	ASTRONOMY & ASTROPHYSICS Solar Spectroscopy
HUET Gerard	5/23/41	FRANCE ESRO	STANFORD UNIVERSITY Sept. 1964-65	ELECTRICAL ENGINEERING Microwaves
KABIERSCH Wolf Dieter	1/14/33	GERMANY FedMinSciRsch	CAL. INST. OF TECHNOLOGY Sept. 1964-65	ELECTRICAL ENGINEERING
KNOTT Karl	8/22/39	GERMANY FedMinSciRsch	U. OF CAL. -Los Angeles Sept. 1964-65	GEOPHYSICS
LAMPI Dr. Giampiero	3/29/36	ITALY ItalComSpaRsch	MASS. INST. OF TECHNOLOGY Sept. 1964-65	PHYSICS
LEORAT Francois	8/30/41	FRANCE ESRO	U. OF CAL. -Los Angeles Sept. 1964-65	PHYSICS
MAJID Abdul	1/5/41	PAKISTAN PakSpaRsch	UNIVERSITY OF COLORADO Sept. 1964-65	ASTROGEOPHYSICS
MANZANO Dr. José R.	2/11/28	ARGENTINA ArgNatComSpaRsch	UNIVERSITY OF MINNESOTA Sept. 1963-Feb. 1965	PHYSICS Cosmic Radiation
MIREMONT Jean Claude	6/13/42	FRANCE ESRO	U. OF CAL. -Los Angeles Sept. 1964-65	ENGINEERING Servo-Mechanics
NAVARRO Carlos C.	10/1/40	SPAIN ESRO	CAL. INST. OF TECHNOLOGY Sept. 1964-65	AERONAUTICS

## NASA International University Fellowships Current Fellowships September 30, 1964

NASA FELLOW	BIRTH DATE	CITIZENSHIP	UNIVERSITY	DEPARTMENT
		Sponsor	Fellowship Term	Field of Study
NEUBAUER Fritz M.	4/10/40	GERMANY ESRO	UNIVERSITY OF CHICAGO Sept. 1964-65	GEOPHYSICAL SCIENCES Geophysics & Theoretical Physics
PALUMBO Dr. Giuseppe	4/5/33	ITALY ESRO	U. OF MARYLAND Sept. 1964-65	PHYSICS Plasma Physics
POMALAZA Diaz José C.	2/13/36	PERU Geophysical Inst.	STANFORD UNIVERSITY Sept. 1964-65	ELECTRICAL ENGINEERING Radio Wave Propagation
PONTHUS Pierre	9/13/40	FRANCE ESRO	MASS. INST. OF TECHNOLOGY Sept. 1964-65	ELECTRICAL ENGINEERING Plasma Physics
SCHNEIDER Klaus-Peter	11/9/36	GERMANY FedMinSciRsch	STANFORD UNIVERSITY Sept. 1964-65	AERO- & ASTRONAUTICS Astronautics & Plasma Physics
SILK Joseph Ivor	12/3/42	ENGLAND ESRO	HARVARD UNIVERSITY Sept. 1964-65	ASTRONOMY Plasma Physics & Cosmology
SMIT Gjalt Roelof	8/21/38	NETHERLANDS NethMinEd	UNIVERSITY OF MARYLAND Sept. 1963-65	PHYSICS & ASTRONOMY Plasmadynamics
TANDBERG Erik	10/9/32	NORWAY Norwegian CSIR	PRINCETON UNIVERSITY Sept. 1964-65	AEROSPACE & MECH. SCIENCES Rocket Propulsion
TSUKAMOTO Kenichi	10/27/29	JAPAN Sci&TechAgency	NEW MEXICO STATE UNIV. Sept. 1964-65	ELECTRICAL ENGINEERING Space Communication
TUMM Gunter Walter	4/22/38	GERMANY ESRO	COLUMBIA UNIVERSITY Sept. 1963-65	NUCLEAR SCI. & ENGINEERING Plasma Physics
UHRMEISTER Bernd	3/7/37	GERMANY FedMinSciRsch	UNIVERSITY OF ARIZONA Sept. 1964-65	AERO- & MECHANICAL ENGINEERING Aerospace Engineering

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NASA International University Fellowships

NASA FELLOW	BIRTH DATE	CITIZENSHIP	UNIVERSITY Sponsor	UNIVERSITY Fellowship Term	Current Fellowships	September 30, 1964	DEPARTMENT	Field of Study
VROONEN Jacques	6/12/41	BELGIUM ESRO		STANFORD UNIVERSITY Sept. 1964-65			ELECTRICAL ENGINEERING Electronics	
WEINGARTEN Heinrich	1/6/34	GERMANY FedMinSciRsch		U. OF CALIFORNIA - Berkeley Sept. 1964-65			ELECTRICAL ENGINEERING Computers:Control Systems	
WENZEL Klaus-Peter	5/10/38	GERMANY FedMinSciRsch		CAL. INST. OF TECHNOLOGY Sept. 1964-65			PHYSICS Nuclear Radiation	
WESSELING Pieter	8/18/42	NETHERLANDS NethMinEd		CAL. INST. OF TECHNOLOGY Sept. 1964-65			AERONAUTICAL ENGINEERING Theoretical Aerodynamics	
WIBBERENZ Dr. Gerd	11/15/30	GERMANY FedMinSciRsch		UNIVERSITY OF MINNESOTA Sept. 1964-65			PHYSICS Cosmic Radiation	
WOODMAN Ronald Francisco	4/22/34	PERU GeophysicalInst.		HARVARD UNIVERSITY Feb. 1964- 65			PHYSICS Wave Propagation	
WU Mao-Fou	7/27/32	CHINA ChineseMinEd		UNIVERSITY OF CHICAGO Sept. 1963-65			GEOPHYSICS Upper Atmosphere Physics	
YAMANAKA Tatsuo	11/13/33	JAPAN Sci&TechAgency		NEW MEXICO STATE UNIV. Sept. 1964-65			MECHANICAL ENGINEERING Gas Dynamics	

NASA International University Fellowships      CURRENT FELLOWSHIPS AT  
PARTICIPATING UNIVERSITIES

September 30, 1964  
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UNIVERSITY	STATE	CITY	NASA FELLOW	Country
<u>ARIZONA</u> UNIVERSITY OF ARIZONA		Tucson	UHRMEISTER	Germany
<u>CALIFORNIA</u> INSTITUTE OF TECHNOLOGY	"	Pasadena	CHIRIVELLA CRESPO GUERMONPREZ HAHNE KABERSCH NAVARRO WENZEL WESSELING	Spain Spain France Germany Germany Spain Germany Netherlands
STANFORD UNIVERSITY	"	Stanford (Palo Alto)	BARTELDS GIRAUDON Huet POMALAZA SCHNEIDER VROONEN	Netherlands France France Peru Germany Belgium
UNIVERSITY OF CALIFORNIA	"	Berkeley	WEINGARTEN	Germany
UNIVERSITY OF CALIFORNIA	"	Los Angeles	HANIF KNOTT LEORAT MIREMONT	Pakistan Germany France France

(continued)

## NASA International University Fellowships

CURRENT FELLOWSHIPS AT  
PARTICIPATING UNIVERSITIES

September 30, 1964

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UNIVERSITY	STATE	CITY	NASA FELLOW	Country
UNIVERSITY OF COLORADO	<u>COLORADO</u>	Boulder	MAJID HU	Pakistan China
UNIVERSITY OF CHICAGO	<u>ILLINOIS</u>	Chicago	NEUBAUER WU	Germany China
STATE UNIVERSITY OF IOWA	<u>IOWA</u>	Iowa City	AKERSTEN	Sweden
UNIVERSITY OF MARYLAND	<u>MARYLAND</u>	College Park	BUZY-DEBAT CHAO PALUMBO SMIT	France China Italy Netherlands
HARVARD UNIVERSITY	<u>MASSACHUSETTS</u>	Cambridge	GERARD HUBER SILK WOODMAN	Belgium Switzerland England Peru
"	"	"	DIERSTEIN FABIS HAMEL LAMPIS PONTHUS	Germany Germany Germany Italy France

(continued)

NASA International University Fellowships      CURRENT FELLOWSHIPS AT  
 PARTICIPATING UNIVERSITIES

September 30, 1964

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UNIVERSITY	STATE	CITY	NASA FELLOW	Country
UNIVERSITY OF MICHIGAN "	MICHIGAN	Ann Arbor	BAUER FOURNIER	France France
UNIVERSITY OF MINNESOTA "	MINNESOTA	Minneapolis	MANZANO WIBBERENZ	Argentina Germany
PRINCETON UNIVERSITY "	NEW JERSEY	Princeton	DICKMANNS TANDBERG	Germany Norway
NEW MEXICO STATE UNIVERSITY "	NEW MEXICO	University Park (Las Cruces)	HOMMEL TSUKAMOTO YAMANAKA	Austria Japan Japan
COLUMBIA UNIVERSITY "	NEW YORK	New York	CHEN TUMM	China Germany
OHIO STATE UNIVERSITY	OHIO	Columbus	HEILBRONNER	Germany

The other five participating universities have no current Fellowships:  
 (University of Alabama, Cornell University, University of Rochester, University of Wisconsin, & Yale University)

NASA International University Fellowships

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September 30, 1964

COUNTRY	Sponsoring Agency	COUNTRIES		CURRENT FELLOWSHIPS				TOTALS	
		FORMER FELLOWSHIPS Fellow	Term	FELLOW	Term	University	Former	Current	
ARGENTINA	NatlComsrs Space Rsch	Radicella Santochi	61-62 62-63	MANZANO	63-64	U.of Minnesota	2	1	
AUSTRIA	ESRO	Pink Sedlacek	63-64 63-64	HOMMEL	64-65	New Mexico St.	2	1	
BELGIUM	Natl Cntr Space Rsch & ESRO	De Gouverneur de Marchin Macar Malaise Villé Wodon	62-64 62-64 63-64 62-64 62-63 62-64	GERARD VROONEN	63-65 64-65	Harvard Stanford			
CHINA	Ministry of Education	-----		CHAO CHEN HU WU	63-65 63-65 63-65 63-65	U.of Maryland Columbia U.of Colorado U.of Chicago	0	4	
ENGLAND	Science Ministry & ESRO	-----		SILK	64-65	Harvard	0	1	
FRANCE	NatCntr Space Studies & ESRO	Chapront Facon Heraud Sivirine	63-64 62-63 63-64 63-64	BAUER BUZY-DEBAT FOURNIER GIRAUDON GUERMONPREZ Huet LEORAT MIREMONT PONTHUS	64-65 64-65 64-65 64-65 64-65 64-65 64-65 64-65	U.of Michigan U.of Maryland U.of Michigan Stanford Cal. Inst. Tech. Stanford U.C.L.A. U.C.L.A.			

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September 30, 1964

NASA International University Fellowships

COUNTRIES

COUNTRY	Sponsoring Agency	FORMER FELLOWSHIPS		CURRENT FELLOWSHIPS		TOTALS	
		Fellow	Term	Fellow	Term	University	Former Current
GERMANY	Fed Min Sci Rsch & ESRD	Ackermann	63-64	DICKMANN	64-65	Princeton	
		Brammer	63-64	DIERSTEIN	64-65	M. I. T.	
		Brezing	62-64	FABIS	64-65	M. I. T.	
				HAHNE	64-65	Cal. Inst. Tech.	
				HAMEL	64-65	M. I. T.	
				HEILBRONNER	64-65	Ohio State U.	
				KABIERSCH	64-65	Cal. Inst. Tech.	
				KNOTT	64-65	U. C. L. A.	
				NEUBAUER	64-65	U. of Chicago	
				SCHNEIDER	64-65	Stanford	
				TUMM	63-65	Columbia	
				UHRMEISTER	64-65	U. of Arizona	
				WEINGARTEN	64-65	U. Calif.-Berkeley	
				WENZEL	64-65	Cal. Inst. Tech.	
				WIBBERENZ	64-65	U. of Minnesota	3 15
ITALY	Ital Comsн Space Rsch & ESRD	-----		LAMPI	64-65	M. I. T.	
				PALUMBO	64-65	U. of Maryland	0 2
JAPAN	Sci & Technology Agncy	Godai	63-64	TSUKAMOTO	64-65	New Mexico St.U.	
		Miyazaki	63-64	YAMANAKA	64-65	New Mexico St.U.	
		Uchida	63-64				3 2
MEXICO	Natl Comsн Outer Space	Malacara-Hdz 61-63		-----		1	0

NASA International University Fellowships

## COUNTRIES

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September 30, 1964

COUNTRY	Sponsoring Agency	FORMER FELLOWSHIPS		CURRENT FELLOWSHIPS		TOTALS	
		Fellow	Term	FELLOW	Term	University	Former Current
NETHERLANDS	Ministry Ed.Arts & Sci.	Brinkman De Jong	62-63 62-63	BARTELDS SMIT WESSELING	64-65 63-65 64-65	Stanford U.of Maryland Cal.Inst.Tech.	2 3
NORWAY	C1 Sci & Industrial Rsch	-----		TANDBERG	64-65	Princeton	0 1
PAKISTAN	Space & Upr Atmos Rsch	Faruqi Rizvi Zaki Zaman	62-63 62-64 62-64 62-64	HANIF MAJID	64-65 64-65	U. C. L. A. U. of Colorado	
PERU	Geophysical Institute	-----		POMALAZA WOODMAN	64-65 64-65	Stanford Harvard	0 2
SPAIN	ESRO	Almuzara Azcarraga Lifan-Mtz Sanz Urrutia	62-64 63-64 62-63 63-64 62-64	CHIRIVELLA CRESPO NAVARRO	64-65 64-65 64-65	Cal.Inst.Tech. Cal.Inst.Tech. Cal.Inst.Tech.	
SWEDEN	Space Rsch Center	Gustavsson Liedquist	63-64 63-64	AKERSTEN	64-65	State U.of Iowa	2 1
SWITZERLAND	CcmSprsch & ESSO	-----		HUBER	64-65	Harvard	0 1